Claims

We claim:

1. A method for providing resistance to infection by a plant virus in a plant or plant tissue, said method comprising transforming said plant or plant tissue with a polynucleotide that encodes a Rep protein, or a fragment or variant thereof, of said plant virus.

2. The method according to claim 1, wherein said plant virus is a geminivirus.

3. The method according to claim 1, wherein said geminivirus is selected from the group consisting of tomato mottle virus, cabbage leaf curl geminivirus, potato yellow mosaic virus, tomato golden mosaic virus, tomato yellow mosaic virus, tomato leaf crumple virus, tomato yellow leaf curl virus and pepper huasteco virus.

4. The method according to claim 1, wherein said polynucleotide encodes a Rep protein of a tomato mottle geminivirus.

5. The method according to claim 1, wherein said polynucleotide encodes a Rep protein of a tomato yellow leaf curl virus (TYLCV-Is).

6. The method according to claim 1, wherein said plant or plant tissue is tomato or tobacco.

7. The method according to claim 1, wherein said plant or plant tissue is transformed with said polynucleotide by agroinfection.

8. The method according to claim 1, wherein said plant or plant tissue is transformed with said polynucleotide by biolistic targeting.

9. A transgenic plant or plant tissue having increased resistance to infection by a plant virus, wherein said plant or plant tissue comprises a polynucleotide sequence that encodes a plant virus Rep protein, or a fragment or variant thereof.

10. The transgenic plant or plant tissue according to claim 9, wherein said plant or plant tissue is tomato or tobacco.

11. The transgenic plant or plant tissue according to claim 9, wherein said polynucleotide encodes a Rep protein of a tomato mottle virus.

12. The transgenic plant or plant tissue according to claim 9, wherein said polynucleotide encodes a Rep protein of a tomato yellow leaf curl virus (TYLCV-Is).

13. The transgenic plant or plant tissue according to claim 9, wherein said plant tissue is a plant seed.

14. The transgenic plant or plant tissue according to claim 9, wherein said transgenic plant or plant tissue is crossed with a second transgenic plant or plant tissue that is resistant to said plant virus and derived from a distinct transformation event, producing a hybrid plant or plant tissue that exhibits increased resistance to infection by said plant virus.

15. A cell transformed with a polynucleotide sequence that encodes a plant virus Rep protein, or a fragment or variant thereof.

16. The transformed cell according to claim 15, wherein said polynucleotide encodes a Rep protein of a tomato mottle virus.

17. The transformed cell according to claim 15, wherein said polynucleotide encodes a Rep protein of a tomato yellow leaf curl virus (TYLCV-Is).

18. The transformed cell according to claim 15, wherein said cell is selected from the group consisting of bacterial cell, insect cell, plant cell and yeast cell.